

# CrushGrind Shaft 195mm Instructions

Most kitchenware shops are now offering salt and pepper mills utilising ceramic mechanisms. The reason for this is that they are durable, adjustable and much more efficient than similar products.

The CrushGrind<sup>®</sup> mechanisms that we sell are available as a shaftless version (CrushGrind Wood) and a 195mm version with a shaft (CrushGrind Shaft). The shaft can be reduced in length for a shorter mill if required. CrushGrind<sup>®</sup> are like no other grinders, their unique ceramic mechanism allows you to grind almost anything, including salt, pepper, coffee, herbs and spices. The mechanisms are fully adjustable from fine to coarse with 14 settings in total and the ceramic parts are guaranteed for 25 years. No glues or screws are necessary for making the mills and a special recess tool from Crown is available for shaping the inside of the blank for insertion of the mechanism.



# CrushGrind Shaft Instructions

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**Congratulations on your choice of this high quality ceramic peppermill mechanism which should give you many years of useful service. The following tips and guidance should assist in the process of making a mill to be proud of.**

## Preparing your blank

Select a suitable section of timber approximately 65mm square and long enough to accommodate your mechanism plus some storage space for peppercorns, salt, etc. The shaft could be reduced in length to make a shorter mill if required.

Turn down to a cylinder between centres slightly undercutting the ends and part off a section about 85mm long that will be used for the top.

## Boring the mill blanks

Remount the body section of the mill holding the end that was adjacent to the top in the jaws of a woodturning chuck.

Using a tailstock chuck and saw tooth Forstner bit drill a 45mm diameter hole in the bottom of the mill body 19mm deep.

Change the size of bit to 38mm diameter and drill to a depth of 53mm overall. A simple way of achieving the correct depth is by wrapping some insulating tape around the shank of your drill bits and using this as a depth guide.

Using a special recess tool, the groove for the catchers on the mill mechanism can now be cut at the bottom of this hole to about 5mm deep x 5mm wide.

Now place a 25 or 26mm diameter bit in your tailstock chuck and drill to a depth of approximately three quarters of the length of the mill body.

Remove the mill body from the lathe and turn end for end gripping the drilled bottom end in your woodturning chuck.

Change the bit size to 38mm and bore a hole 15mm deep and then change to a 25 or 26mm bit and bore to meet the hole you bored from the other end of the mill. The boring on this section is now complete.

Now mount the top section into the woodturning chuck and gripping it by the uppermost part drill a 22mm hole to a depth of 40mm using a saw tooth Forstner bit. Turn a tenon on the top section approximately 10mm

long by 38mm diameter to fit into the hole bored into the top end of the mill body. Use the body of the mill as a sizing guide for this tenon.

Using a recess tool, make a 5mm location groove for the catchers on the top section of the mechanism. This should be 14.8mm in from the edge of the hole.

This concludes the boring of the top section of the mill.

## Finishing your mill

Make up some stepped hardwood insert blocks to fit the holes at either end of the mill body and remount between centres. Make sure you get a snug fit between the body of the mill and the blocks. Turn the mill body to your chosen design and sand and finish.

Turn a stepped insert block mounted on your screw chuck to fit into the 22mm hole in the top section of the mill. When a good friction fit is achieved, mount and turn the top section of your mill to your chosen design, sand and finish. As an alternative you could hold the top section by holding the tenon in your woodturning chuck for shaping and finishing.

The following saw tool Forstner bits are available for drilling the required holes

**502051** Fisch Saw Toothed Forstner Bit 22mm

**502052** Fisch Saw Toothed Forstner Bit 25mm

**502056** Fisch Saw Toothed Forstner Bit 38mm

**502057** Fisch Saw Toothed Forstner Bit 45mm

## Final Assembly

When you are satisfied with the design and finish of your mill, you will need to assemble the components. A careful check of dimensions should be made before assembly of the mill takes place **N.B When producing a CrushGrind mill, the utmost care and attention should be paid to the dimensions given as this will ensure the assembly goes smoothly and you will have a mill that will last for many years.**

Make up a cylindrical block of wood 44mm diameter by 25mm long and produce a recess in one end big enough to accommodate the knob at the bottom of the mechanism. This is used to press the mechanism up into the lower section of the mill.

A suitable block will be needed for the top end but

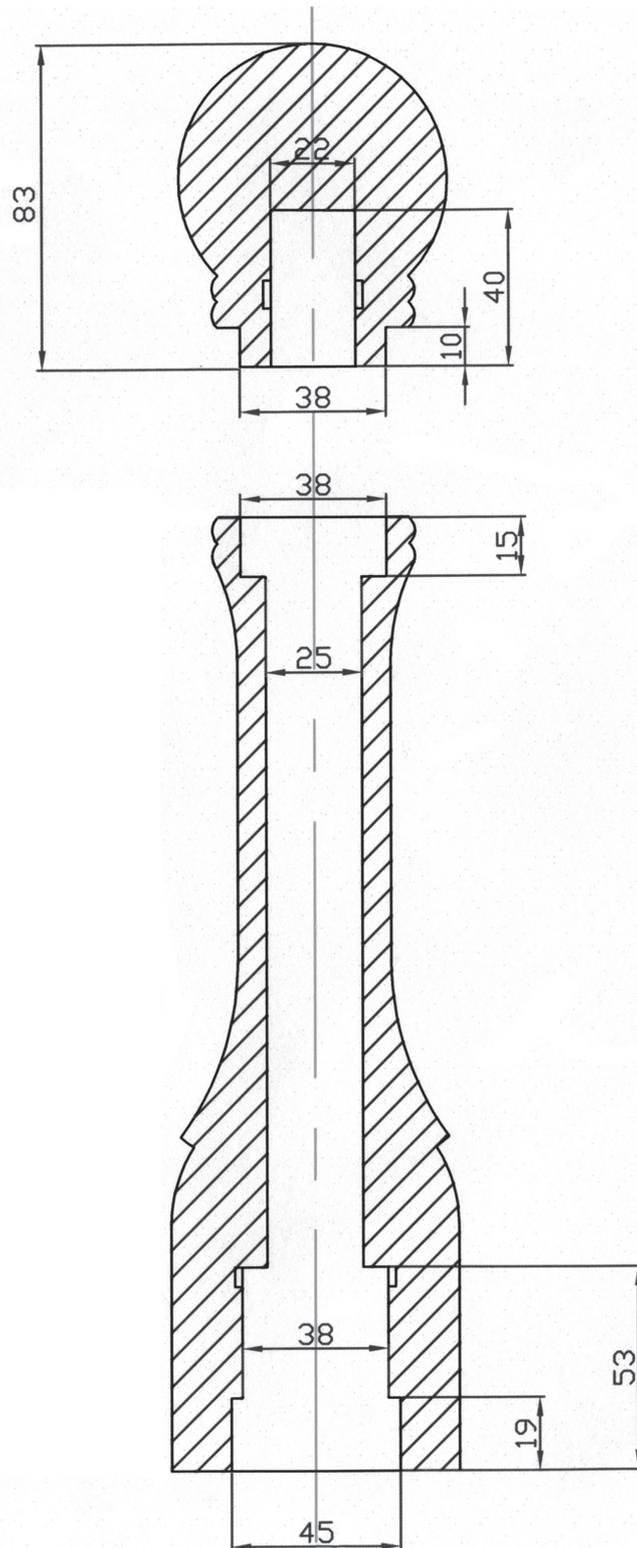
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the size and shape will be determined by the design of your mill. A bench drill can be used for pressing the components together or you could mount between centres and use the tailstock quill for pressing the mechanism into place.

A Crown side cutting scraper for producing the recess to accommodate the catchers of the mechanism is available (952594)

## CrushGrind Shaft Drawing

Measurements are in (mm)





Please dispose of packaging for the product in a responsible manner. It is suitable for recycling. Help to protect the environment, take the packaging to the local recycling centre and place into the appropriate recycling bin.